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FDI/ARCS# 1892

U. S. Environmental Protection Agency
Attn: Ms. Stacey Bennett
Work Assignment Manager
Region VI
1445 Ross Avenue
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CONTRACT NO. 68-W9-0013
NARRATIVE SUMMARY FOR
CASTLE DRIVE & MILES ROAD LANDFILL
TXD # 980750368, GARLAND, TX
SITE INSPECTIONS
WA # 25-6JZZ

Dear Ms. Bennett:

Please find enclosed the referenced narrative summary and attached CERCLA Eligibility Questionaire. Please contact myself or Jonathan Stewart if you have any questions regarding this document.

Sincerely,

for William Walters
ARCS Project Engineer

Mark L. deLorimier, P.E.
ARCS Program Manager

WDW/MLdL:ska

cc: File

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CASTLE DRIVE & MILES ROAD LANDFILL NARRATIVE SUMMARY
Garland, Texas
CERCLIS ID TXD 980750368

SITE DESCRIPTION AND HISTORY

The City of Garland Castle Drive & Miles Road site is an active landfill located in Garland, Dallas County, Texas, west of Castle Drive and south of Miles Road adjacent to their intersection. The geographical coordinates of the center of the site are 32°56'15" north latitude and 96°34'48" west longitude (Ref. 1, 2).

The site encompasses 61.5 acres and owned and operated by the City of Garland (Ref. 2). A total of 10 employees work on-site at the landfill (Ref 14). The landfill operates, at a maximum, from 7:00 am to 7:00 pm Monday through Sunday. The landfill only excepts municipal solid wastes, including Duck Creek wastewater treatment plant sludges. No liquid or hazardous waste is accepted (Ref 2). The City of Garland disposes approximately 600 tons/day of refuse into the landfill (Ref 12).

The City of Garland operates this landfill and the Castle Drive Landfill (TXD980626766) as one landfill. Although the site has undergone permit modification to manage these sites as one landfill, it still has two operating permits (1277 for Castle & Miles and 1062A for Castle). The site has an engineered clay liner which is a minimum of 3 feet thick (Ref 10). Thirteen monitoring wells exist on-site and limited hazardous constituent data are available (Ref 5, 6). The entire working landfill will have a minimum cover of 2 feet applied once it is closed in 1999 (Ref 5, 13).

The site is a single parcel owned by the City of Garland (Ref 4). Access to the site is controlled by a gatehouse and lockable gate at the entrance. Unauthorized entry is additionally discouraged through fencing alongside Castle Drive and Miles Road (Ref 14).

The site drains to the southwest into Rowlett Creek, which is less than 4/5 mile from the site (Ref 1). Rowlett Creek outlets 2 1/2 miles south from the probable point of entry (PPE) into Lake Ray Hubbard. Lake Ray Hubbard is used as a main water supply for the City of Dallas. Lake Ray Hubbard was formed by damming the east fork of the Trinity River. The 15 mile downstream segment ends on the east fork of the Trinity River, south of Lake Ray Hubbard. The site is outside of the 500 year floodplain (Ref 9).

There are no municipal water wells in the City of Garland (Ref 11). The City of Garland receives its water by pipeline from Lake Lavon. The City of Garland historically used groundwater for its municipal water source; however, groundwater has not been used since 1960. All municipal wells were abandoned and filled with sand and concrete. The depth to groundwater for these wells (3,200 feet) and groundwater temperature discouraged its further use (Ref 11).

There are no federal or state designated sensitive environments near the site (Refs 7, 8). No federal or state designated endangered or threatened species are known to use land within 4 miles of the site; or exist in, or regularly use water from, the surface water pathway (Ref 7, 8). The Texas Garter snake is a state Category 2 (under review) species and may inhabit terrestrial areas within 4 miles of the site.

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The United States Environmental Protection Agency (EPA) identified the Castle Drive & Miles Road Landfill as a potential Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site upon receipt of the CERCLA "Potential Hazardous Waste Site Identification and Preliminary Assessment" report filed by the Texas Department of Health on February 20, 1981 (Ref 2).

Samples have been taken from the 13 monitoring wells on-site (Ref 6) and one sample was analyzed for metals. No significant levels of hazardous metals were found in this one sample.

IDENTIFIED OR POTENTIAL PROBLEMS

The Texas Department of Health "Potential Hazardous Waste Site Identification and Preliminary Assessment" report notes that the landfill only accepted municipal solid waste (Ref 2). This form additionally notes that site control was probably adequate and no hazardous waste problem is anticipated for this site (Ref 2). However, if the landfill had received significant amounts of hazardous waste, hazardous material would have the potential to be released through any of the normal migration routes.

QUESTIONS AND DATA GAPS

The information available for this site is limited; therefore, there are many questions and data gaps. It is expected that some of the site questions will go unanswered and some data gaps cannot be filled using referenceable sources. However, an attempt will be made to answer all site questions and fill all of the site data gaps during the site reconnaissance, sampling event, and through additional contact with the State of Texas, the Dallas County, and the City of Garland. A list of the most important site questions and data gaps is given as follows:

Landfill Data

- Are there significant levels of hazardous constituents at the site, or migrating from the site?
- What is the current physical status of the site? What is the depth of the waste? What is the total volume of the waste to date and what will be the closed landfill volume?
- Additional site history would be helpful to fully characterize the site (Were there any other historic activities conducted on this site? Has fuel been stored on-site for the earth moving equipment used at the site? Is fuel currently being stored on-site? Are any other chemicals being used on-site for equipment cleaning, etc.?)
- Are there any obvious stains or other peculiar surface features associated with the site?

- What is the state of the vegetation at the site?
- What depth is the water in the monitoring wells at the site?

Groundwater Pathway Data

- Are there any municipal groundwater wells within a four mile radius of the site? If any, what population do they serve? How many private wells are within a four mile radius of the site? Are these private wells used as a resource (i.e. for agriculture, livestock, etc.), as potable water, or both?
- What is the depth to groundwater? What is depth of aquifers currently being used within 4 miles of the site? What are the aquifer interconnections?
- What is the soil permeability from the surface to the highest used or interconnected aquifer? What is the thickness of the least permeable layer?
- Does groundwater connect with surface water within 1 mile of the site?

Surface Water Pathway Data

- What is the flow rate of Rowlett Creek? Are there any beneficial uses for the water from Rowlett Creek in the segment from the PPE to its discharge into Lake Ray Hubbard?
- What is the total annual surface water and groundwater recharge into Lake Ray Hubbard?
- Where are the water intakes located in Lake Ray Hubbard? What population does Lake Ray Hubbard serve? What kind of water treatment is performed on water taken from the lake prior to its distribution? Is there any available water quality data for hazardous constituents?
- What is the flow rate of the east fork of the Trinity River south of Lake Ray Hubbard? Are there any beneficial uses for the water from the east fork of the Trinity River from Lake Ray Hubbard to the end of the 15 mile downstream segment?
- Is Rowlett Creek fished? If yes, what is the fish productivity (how many pounds of fish are taken annually) in Rowlett Creek from the PPE to its discharge into Lake Ray Hubbard? What is the fish productivity in Lake Ray Hubbard? Is the east fork of the Trinity River fished? If

yes, what is the fish productivity in the east fork of the Trinity River from Lake Ray Hubbard to the end of the 15 mile segment?

- What is the total length of wetlands along the surface water pathway?

Soil Exposure Pathway Data

- What is the population within 200 feet of the site?

Air Pathway Data

- Is there any evidence of biogas release from the landfill?
- What is 4 mile radius population profile surrounding the site?
- What is the acreage of wetlands within a 4 mile radius of the site?

REFERENCES

1. U.S. Geological Survey, 7.5 minute topographic map, Rowlett, Tex., 1959 (photorevised 1968 and 1973).

2. Texas Department of Health, "Potential Hazardous Waste Site Identification nad Preliminary Assessment", February 20, 1981.

3. Texas Department of Health, "Potential Hazardous Waste Site Final Strategy Determination", February 20, 1981.

4. Record of Telephone Conversations between Tom Casabonne, Fluor Daniel, and the Dallas County Tax Office (various personnel). March 22-30, 1993.

5. Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Ken Smith, Landfill Director City of Garland Sanitation Department. March 16, 1993.

6. Groundwater Monitoring Reports, Solid Waste Permit No. 1062-A. Submitted to Texas Water Commission from the City of Garland. February 4, 1993.

7. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Jeff Reed, U.S. Fish & Wildlife Service Ecological Division. April 7, 1993.

8. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Dorinda Sullivan, State of Texas Parks & Wildlife. April 7, 1993.

9. Federal Emergency Management Agency, Flood Insurance Rate Maps, Garland, Texas, Community-Panel Number 485471 0010 D, Map Revised Date August 15, 1990.

10. Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Ken Smith, Landfill Director City of Garland Sanitation Department. April 5, 1993.

11. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Jack May, City of Garland Water Department. April 8, 1993.

12. Municipal Solid Waste Facilities Quarterly Report. From the City of Garland to the Texas Water Commission. Second, Third and Fourth Quarter of 1992.

13. Sanitary Landfill Permit Application. Attachment No. 7 - Typical Fill Cross Sections. City of Garland. 1984.

14. Site Operating Plan (revised). City of Garland. October 19, 1992.